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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,001	04/15/2004	Larry S. Eoff	2002-IP-007056U2	7284
7590	01/06/2006			
Robert A. Kent Halliburton Energy Services 2600 South 2nd Street Duncan, OK 73536-0440			EXAMINER SUCHFIELD, GEORGE A	
			ART UNIT 3676	PAPER NUMBER
DATE MAILED: 01/06/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/825,001

Applicant(s)

EOFF ET AL.

Examiner

George Suchfield

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) 25-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) 7/11/05, 11/9/05, 8/23/04, 8/30/04, 4/15/05, 4/21/05, 4/6/05;
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

I. A method of reducing the water permeability of a well bore with a water soluble relative permeability modifier comprising a hydrophobically modified water soluble polymer. Claims 1-24 exemplify this species.

II. A method of reducing the water permeability of a well bore with a water soluble relative permeability modifier comprising a hydrophilically modified water soluble polymer. Claims 25-52 exemplify this species.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claims are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to

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be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Robert A. Kent on December 12, 2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-24. Affirmation of this election must be made by applicant in replying to this Office action. Claims 25-52 stand withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-27 of copending Application No.

10/893,210. Although the conflicting claims are not identical, they are not patentably distinct from each other because the hydrophobically-modified water soluble polymer component of the spacer fluid circulated in the '210 claim 1 process will obviously reduce the permeability of the adjacent borehole walls upon contact therewith, as called for in the pending claim 1 process. Moreover, note that the '210 claim 1 further characterizes their polymer as a "relative permeability modifier".

Otherwise, it appears all the steps and/or limitations of the pending claims 2-24 are recited within the '210 claims 2-27. For example, both pending claim 2 and '210 claim 9 call for the hydrophobically-modified polymer to be a reaction product of a hydrophilic polymer and a hydrophobic compound. Similarly, both pending claim 16 and '210 claim 22 call for the hydrophobically-modified polymer to be a reaction product of a hydrophilic monomer and a hydrophobically modified hydrophilic monomer.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 1, 2 and 16-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Argillier et al (5,637,556).

Argillier et al (note col. 1, lines 19-23) discloses, in one embodiment, a process of completing a well wherein a spacer fluid is circulated in the well, in the customary manner of separating and/or displacing a fluid(s) from a well. The spacer fluid utilized comprises an exemplary hydrophilically-modified, water soluble polymer. It is deemed that such polymer will inherently or necessarily reduce the permeability of the borehole wall upon contact with the spacer fluid during the circulation process, e.g., by virtue of its high molecular weight and viscosity. Moreover, note the abstract of Argillier et al specifically refers to use in “a well crossing at least one permeable geologic formation”.

As per claim 2, it is noted that Argillier et al may further include another or secondary hydrophilically-modified, water soluble polymer comprising a hydrophobically-modified cellulose derivative, which appears to include a reaction product of the reactive cellulose polymer with a hydrophobic compound (note col. 2, lines 37-67).

As per claims 16-24, the exemplary hydrophilically-modified, water soluble polymer, such as “HM PAM” utilized in the process of Argillier et al (note col. 1, line 50 - col. 2, line 35) appears to encompass all the limitations set forth in these claims, i.e., all the monomers recited, such as the “AMPS” monomer of claim 17, appear to fall within the range or class of monomers

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falling within the recited formula of Argillier et al. Also, the relative range or amounts of hydrophilic to hydrophobic monomer recited in claim 22 appears encompassed by Argillier et al.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Argillier et al (5,637,556) as applied to claim 1 above, and further in view of Landoll (4,228,277).

Landoll (note col. 2, line 66 - col. 3, line 12) discloses the formation of a hydrophobically-modified cellulose ether polymer or viscosifier by, in one embodiment, carrying out a reaction between the cellulose ether and an alkyl halide.

Accordingly, it would have been obvious to one of ordinary skill in the art to which the invention pertains, to similarly prepare the hydrophobically-modified cellulose ether or "HM HEC" viscosifier component utilized in the process of Argillier et al by reaction of the cellulose ether with an alkyl halide, as taught by Landoll, based on, e.g., the availability and/or cost effectiveness of the alkyl halide, relative to other conventional hydrophobically-modifying reactants.

As per claims 14 and 15, Argillier et al discloses the alkyl group added to the cellulose derivative may comprise between 4 to 25 carbon atoms, which encompasses the recited range and particular alkyl halide of these claims.

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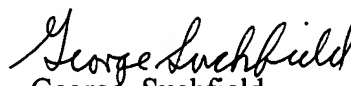
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Other references disclose the use or circulation of exemplary spacer fluids comprising a polymer or viscosifier component(s).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Suchfield whose telephone number is 571-272-7036. The examiner can normally be reached on M-F (6:30 - 3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached on 571-272-6843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
George Suchfield  
Primary Examiner  
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Gs  
January 2, 2006